

# PATENT SPECIFICATION



Application Date : April 8, 1924. No. 8910/24. **233,850**

Complete Left : Jan. 8, 1925.

Complete Accepted : May 21, 1925.

## PROVISIONAL SPECIFICATION.

### Improvements in Valve Seats.

We, ROBERT ADDY HOPKINSON, a British subject, and J. HOPKINSON & COMPANY LIMITED, a British company, both of Britannia Works, Huddersfield, in the County of York, do hereby declare the nature of this invention to be as follows:—

This invention relates to valves and has for its object to provide improved means for facilitating the screwing of the valve seats into position. Heretofore the seats have usually been provided with lugs projecting inwards therefrom which can be engaged by a tool for screwing purposes but such lugs are liable to be fractured or broken off in use.

In accordance with our invention, a portion of the bore or throughway aperture of the valve seating is formed as a straight sided figure such as a square or hexagon so that a bar of corresponding

section can be utilised for screwing the seat into position. The square, hexagonal or other portion of the bore does not extend up to the seating surface so that liability of damage to the seat by the bar utilised for screwing purposes is minimised. The cylindrical portion of the bore of the seating has, with our construction, to be larger in diameter than the corresponding bore of an ordinary valve seating as the area through the square, hexagonal or other portion of the bore must approximate the area of the bore of the normal valve seat.

We do not limit ourselves to any particular shape or number of sides of the straight sided portion of the valve seating.

Dated this 12th day of March, 1924.

MARKS & CLERK.

## COMPLETE SPECIFICATION.

### Improvements in Valve Seats.

We, ROBERT ADDY HOPKINSON, a British subject, and J. HOPKINSON & COMPANY LIMITED, a British company, both of Britannia Works, Huddersfield, in the County of York, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to valves and has for its object to provide improved means for facilitating the screwing of the valve seats into position. Heretofore the seats have been provided with lugs projecting inwards therefrom which can be engaged by a tool for screwing purposes; also with depending

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arms terminating in a disc like part having a non-circular aperture therein.

The improved valve seat is of the throughway type having no lateral apertures. A portion of the bore or throughway aperture is formed as a straight sided figure such as a square or hexagon, so that, in known manner, a bar of suitable section can be utilised for screwing the seat into position. The square, hexagonal or similar portion of the bore does not extend up to the seating surface but, in accordance with our invention, terminates in or adjoins a cylindrical portion so that liability of damage to the seat by the bar utilised for screwing purposes is minimised. The cylindrical

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portion of the bore of the seating has, with our construction, to be larger in diameter than the corresponding bore of an ordinary valve seating as the area through the square, hexagonal or other portion of the bore must approximate the area of the bore of the normal valve seat.

We do not limit ourselves to any particular shape or number of sides of the straight sided portion of the valve seating. Referring to the accompanying sheet of explanatory drawings:—

Figure 1 is a sectional elevation and Figure 2 a plan showing a valve seat constructed in accordance with this invention.

The same reference letters in the two views indicate the same parts.

In the example illustrated, a portion *a* of the bore or throughway aperture of the valve seating *b* is made of hexagonal form for the purpose aforesaid. Above the said portion *a* of the said bore or

throughway aperture there is the portion *c* of cylindrical form such as is hereinbefore referred to.

The portion *d* shown by dotted lines at Figure 1 represents a valve in its closed position upon its seating.

We are aware that it has here been proposed to form a valve seating with a bore which has inwardly projecting lugs beneath a cylindrical portion.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

A valve seating of the type aforesaid having a portion only of the bore or throughway aperture in the form of a straight sided figure such as a square or hexagon, said portion adjoining a cylindrical portion of larger area, substantially as described and as illustrated.

Dated this 2nd day of January, 1925.

MARKS & CLERK.

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1925

[This Drawing is a full-size reproduction of the Original.]

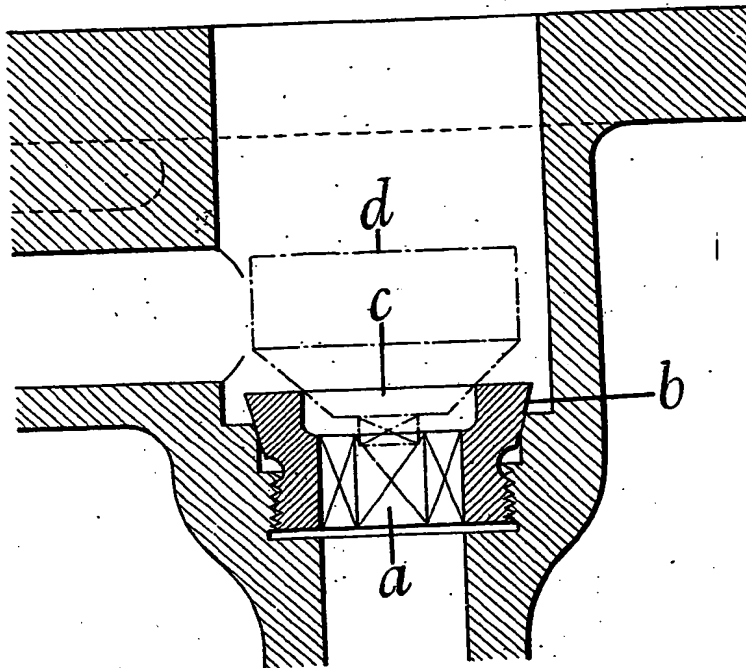


Fig.1

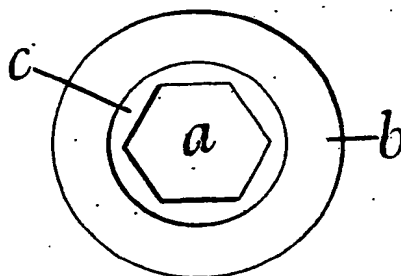


Fig.2

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